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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,825	11/20/2001	Volker Ernst	178/50615	8680

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 07/22/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,825

Applicant(s)

ERNST ET AL

Examiner

PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status*Response*1) ☒ Responsive to communication(s) filed on 03/11/032a) ☐ This action is FINAL.2b) ☐ This action is non-final.3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.**Disposition of Claims**4) ☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.6) ☒ Claim(s) 1-18 is/are rejected.7) ☐ Claim(s) _____ is/are objected to.8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.**Application Papers**9) ☐ The specification is objected to by the Examiner.10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. §§ 119 and 120**13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).a) ☐ All b) ☐ Some * c) ☐ None of:1. ☐ Certified copies of the priority documents have been received.2. ☐ Certified copies of the priority documents have been received in Application No. _____.3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).a) ☐ The translation of the foreign language provisional application has been received.15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.**Attachment(s)**1) ☒ Notice of References Cited (PTO-892)2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____4) ☐ Interview Summary (PTO-413) Paper No(s) _____5) ☐ Notice of Informal Patent Application (PTO-152)6) ☐ Other: _____

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Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-10 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (4,082,071; 10, 12, 14, 16, 18, 20, 22, 28, 34, 50, 52, 58, 61, 64, 67 & 76 in Fig. 7; col. 1, lines 13-15; col. 3, line 1 through col. 4, line 33; col. 5, line 64 through col. 6, line 2), in view of either Poulsen (6,299,662 B1; Abstract; 5-8 & 20 in Fig. 3; 11 in Figs. 4 & 5; col. 3, line 62 through col. 4, line 11; col. 5, lines 20-31) or Brunner (5,964,909; Abstract; 1 in Fig. 1; col. 3, lines 1-42) and further in view of the German Patent (DE 2324575B2; 60 in Fig. 1).

Jones discloses a liquid separator for separating liquid entrained in a crankcase gas flow of an internal combustion engine comprising a housing with a cover (12) having an inlet (61) and an outlet gas (67) to be purified, and a cylindrical separating cartridge (16). Jones also discloses the separating means and the support member embedded in at least one end disk made of rubber or bonded with an adhesive to the separating means and to the support member, and the mounting member firmly attached to the cover. Claims 1-10 and 14-18 differ from the disclosure of Jones in that there is a mount to form a seal and a drain for separating liquid. Either Poulsen or Brunner discloses a cylindrical separating cartridge received in the mount (4 in Poulsen or 1 in Brunner) wherein the separating cartridge comprises a separating means wound around a support member with end disks on both axial end faces thereof, and wherein the end disks engage the mount to

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form a seal and together with the support member form a sealed assembly which divides the separator into an untreated gas zone and a treated gas zone and wherein the mount is constructed as a nipple (4 in Poulsen or 1 in Brunner) that is gas permeable in the area between the end disks of the separating cartridge. The German reference discloses an aerosol coalescing filter with a drain provided with a flow valve for separated liquid. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a mount as a nipple as taught by either Poulsen or Brunner and a drain with flow valve as taught by the German reference in the liquid separator of Jones to provide a need for securing and sealing the cartridge filter to insure dust tight seal and to insure the liquid separated from the crankcase air stream and accumulated in the collection chamber can be drained out.

3. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (4,082,071; 10, 12, 14, 16, 18, 20, 22, 28, 34, 50, 52, 58, 61, 64, 67 & 76 in Fig. 7; col. 1, lines 13-15; col. 3, line 1 through col. 4, line 33; col. 5, line 64 through col. 6, line 2), in view of the either Poulsen (6,299,662 B1; Abstract; 5-8 & 20 in Fig. 3; 11 in Figs. 4 & 5; col. 3, line 62 through col. 4, line 11; col. 5, lines 20-31) or Brunner (5,964,909; Abstract; 1 in Fig. 1; col. 3, lines 1-42) and further in view of the German Patent (DE 2324575B2; 60 in Fig. 1), as applied supra to paragraph 2 above, in view of Gewiss et al (5,413,712; 5, 9, 10, 11, 17 & 18 in Fig. 1; col. 2, line 59 through col. 3, line 16).

Claims 11-13 call for the support member and the end disk constructed as a single part and locking members to fix the cartridge in position. Gewiss et al disclose the support member

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and the end disk are constructed as a single part (11, 14 & 15) and locking member with locking projections (17 & 18) to fix the cartridge in position. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the support member with locking members as taught by Gewiss et al in the liquid separator of Jones to insure good sealing between the end disk and the cover preventing any air leakage or air bypassing the separating cartridge.

Response to Arguments

4. Applicant's arguments filed on March 11, 2003 have been fully considered but they are not persuasive.

Applicant argues that the primary reference Jones does not teach a mount to form a seal and the mount constructed as a nipple. The Examiner newly introduces Poulsen and Brunner as the secondary references to show the limitation of a mount constructed as a nipple (see 4 in Poulsen or 1 in Brunner) and this mount as a nipple is provided as a securing and sealing means for the filter cartridge to insure dust tight seal (see col. 2, lines 16-38 of Brunner or col. 3, line 62 through col. 4, line 11 of Poulsen).

5. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection as discussed above.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau Pham whose telephone number is (703) 308-1605. The examiner can normally be reached on Monday-Friday (except Wednesday) from 7:15 a.m. to 5:45 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Blaine Copenheaver, can be reached on (703) 308-1261. The fax phone number for this Group is (703) 872-9310 (non-finals) or (703) 872-9311 (after-finals).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



Minh-Chau Pham

Patent Examiner

July 18, 2003